Computer Final Revision

1st.Preparatoury -1st.Term

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Lesson 1 : Computer system

- **Computer** is an electronic set or device that process data and converting it into information.
- **Computer types:**
  1- Desktop　　2- Laptop　　3- Smart devices
- **Computer system consists of: (4)**

1- Hardware Part of computer you **can** touch.	2- Software Part of computer you **can't** touch.	3- Humanware	4- Data & Information
1. **Input unit** (Keyboard – Mouse – Mic – Joystick – Scanner – light pen) 2. **Output unit** (Monitor – Speaker- Printer –Plotter) **Note: Touch Screen is an input & output.** 3. **Storage unit**: (Hard desk – Flash memory – CD) **Measurement units**: (Bit – Byte – Kilo Byte – Mega Byte – Giga Byte – Tyra Byte) 4. **System unit**: **a-** Mother board **b-** Processor (Hz) **Hertz (Hz) is a measuring unit of processor** **c-**Memory (RAM – ROM) **RAM** = Random Access Memory **(temporary)** **ROM** = Read Only memory	1. **Operating system** (windows – Mac…..) 2. **Programming language** (C# - C++ - Java…) 3. **Applications** (Text editor) 4. **Utilities** (Antivirus….) **A. Closed source program** A type of programs where you **can't read** its source code. It is only available for programmers or designers. Ex: Photoshop / Microsoft office / Adobe Reader / Windows B. **Open source program** They are the programs of source code **available for use**, editing, development and distribution. Ex: Open Shot/ Gimp / **Software** is **based on** the **rights** **of** **ownership** divided to three types: 1) **Freeware**: allow the possibility to take full advantage of them without a fee. 2) **Shareware**: trial program for limited time .	1) **Analyst** 2) **Designer** 3) **Programmer** 4) **User**	1. **Data** a) Consists of individual facts or bits of information b) The computer stores data of all kinds (words, number, image, sound or videos). 2. **Information** c) Information is the result of processing Data

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Definition of operating system: -

A **group of programs** responsible for **managing** **computer parts** and Intermediary **between** the **user** and the **programs** on the one hand and between the hardware on the other hand

Operating system responsible for running

1) Hardware   2) Software

User can deal with the operating systems by

1) Command prompt   2) Graphical user interface

Operating system task

1) **Control** all devices connected with the computer (printer, scanner .....)
2) **Manage** the dealing between software and memory.
3) **Transferring** data between different computer units and saved inside storage units
4) **Security** (password)
5) It **provides** an interface through which the user can deal with the device.

▪ **Closed source operating system**	**Mac** OS (Apple Macintosh devices only) **Windows** (most famous operating system)
▪ **Open source operating system**	**LINUX** OS and its Distributions **Fedora** **Ubuntu**
▪ **Mobiles operating systems**	Google **Android** OS is an Example of **open source operating system** Apple **IOS** is an Example of **closed source operating system**

Advantages of Graphical User Interface for operating systems

1- **Graphical interface** displays programs in the form of regular windows
2- Users can use **dropdown menus** and toolbars to do his tasks
3- Users can **run more than one programs** at the same time
4- **Arabic language** can be used as an interface language for the programs
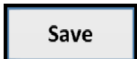5- **Providing browser** to open website.

The similarities between operating systems

The **interfaces** of the **operating** **systems** can be **similar** in the following

1- **Background**: - may be colors, pictures that can be changed by the user
2- **Icons**: - small symbols that can be used to run programs
3- **Bars**: - used to contain icons such as date and time icons

Lesson 3: Dealing with files and folder

- Each operating system is depending on <u>file system</u>, which is used to <u>control</u> the <u>storage</u>, <u>retrieval</u>, <u>organize</u> and <u>management</u> of files.
- When the computer <u>turned off</u> all data in the main memory (<u>RAM</u>) <u>vanishes</u> and to save it we <u>have to save it</u> inside any storage unit.

Types of common files	Creating text files	Saving text files	Save	Save as
✓ Video files ✓ Photos files ✓ Text files ✓ System files	1. **Run** any text editor program (word) 2. **Type** the **text** you want to write	1. Open **file** menu 2. Select **save as** 3. Save as dialogue box appears 4. **Type** the **name** of the file you want to save 5. **Select** the **location** where you want to save the file 6. **Select** Save	• **Used** when creating the file for the **first time** • Used when a change happened to the file to **save** the change **in the same file** with the same name	• Used when creating the file for the **first time** • Used when we **change** the **name** of the file or save the file in a new place or save the file by a new **extension**

- **Search for files and folder**

1- Search by using the **<u>name</u>** of file or folder or its **<u>Extension</u>**.

- **Folder definition :-**

A place inside the storage place contains a file or group of files, and sometimes contains a folder or other folders which is called sub-folders

- We can create **new folder** by clicking on **Ctrl + Shift + N** from the keyboard

Creating folder	cut – paste	Copy – Paste	Folder Rename
Creating folder 1- **Right click** on the area where you want to create new folder 2- **Shortcut** menu appears. 3- Select **new** folder. 4- **Type** the new folder **name**. Click Create **Delete Folder** 1- **Right click** on the **folder** you want to delete 2- From **shortcut** menu select move to trash when we want to delete file or folder from Trash we select Delete from Trash	When you **cut** folder, the folder **moves** from its current location and moves to a new one. **Steps to cut folder** a) **Right click** on the **folder** you want to cut. b) From **shortcut** menu select **cut**. c) Go to the new **location**. d) **Right** click. e) From shortcut menu select **paste**. **Restoring deleted folders from recycle bin** Any deleted file or folder moves to trash and we can restore it or delete it permanently 1- **Double click** on the **recycle** bin folder (**trash** folder). 2- **Right click** on the folder you want to restore. 3- From **shortcut** menu select **Restore from Trash.**	Make a **backup copy** from a folder in the same storage place or in another place. **Steps to copy folder** **Right click** on the folder you want to copy 1- From **shortcut** menu select **copy** 2- Go to the new **location** 3- **Right** Click 4- From shortcut menu select **paste**.	1- **Right click** on the **folder** you want to rename. 2- From **shortcut** menu select **rename**. 3- Write the new name then click Rename.

- **Computer Network: -**

It is a connection of two or more computers through a communication intermediary wired or wireless connection in order to share resources. (Data and Hardware)

- **The importance of computer networking**

1) **Sharing** resources (such as printer – scanner – storage devices)   2) **Sharing** data and programs between computers network

3) A **centralized** database

Types of networking: -	Files sharing	Steps of **sharing** folders in **windows** operating systems	**Sharing** Files in **Fedora** operating system
1- (LAN) Local Area Network Computer network covering a limited area such as a (school, laboratory, and university) **2- (WAN) Wide Area Network** Computer network covering a large geographical distance such as (countries. continents.) **The internet is a type of WAN**	- Means to **publish digitally** stored information such as computer programs / multimedia (video – audio – images) / document / electronic books.	1- Put the files inside a folder. 2- Right click on the folder (Books) which contains the files you want to share 3- From shortcut menu select **Share with** 4- Select specific people from sub menu 5- File sharing dialogue box appears. 6- Choose the user you want to share with. 7- Click "Add "to be from the allowed users. 8- Determine Permission Level (Read or Read / Write) 9- Click Share button.	1- Click on Activities which located in the top bar of the opening screen. 2- Type "Sharing " in the search bar 3- Click on sharing icon 4- Turn the sharing button from OFF to ON 5- Turn **Personal File Sharing** into ON
What's your computer name? 1- Right click on My Computer icon 2- Select Properties from the shortcut menu 3- Computer name appears in the box computer name	**Access to a folder on the network** 1) Click on "Network" on the desktop 2) Double click on the desired device to access it 3) The window of the al folders that are shared appears**.**		

Unit Two: Gimp

GIMP is an open and free source program	GIMP default Interface:	click F1 from the keyboard to open the Help of this program
GIMP is an open and free source program	**GIMP default Interface:**	click **F1** from the **keyboard** to open the **Help** of this program
GIMP program for the first time it is usually on (multi-window mode).	1.The Main Toolbox. 2 The Tool Options Dock. 3. Image windows. 4.(Layers/Channels/paths/Undo). 5. (Brushes/Patterns/Gradients).	

Main menus in Gimp

❖ **File menu**	❖ **Select menu**	❖ **Image menu**
1-New Create a new image 2-Open Import Image for editing. 3-Save 4-Save as To save your project. GIMP extension is "XCF" 5-Export To export the image as a file with the appropriate extension: (JPEG – GIF – PNG)	1- Invert ❖ **Layer menu** 1- Transparency → Add Alpha Channel ❖ **Windows menu** 1- Single-Window Mode Change from multi windows to single window 2- Recently Closed Docks To restore any closed tabs	1- Flatten Image Merging all layers, to become one layer ❖ **Filter menu** Select the appropriate filter

In the dialogue box to create a new image:

1-**Templates**: are previously ready-made designs prepared of the dimensions and the resolution of the image.

2-**Image Size: to** identify the dimensions of the new image (length and width) by clicking on the arrows.

3-**Advanced Options:** by clicking on + sign the rest of the dialogue box appears as follows:

4-**Resolution:** used to determine the image accuracy when printing

5-**Color Space:** This is used to determine the Image color scheme **RGB** or **Gray scale**

6- **Fill with:** It is used to specify the new image filling color which can be:

  -**Background** Color

  -**Foreground** Color

  -**White** filling the image in white color.

  -**Transparency** to make the image background transparent.
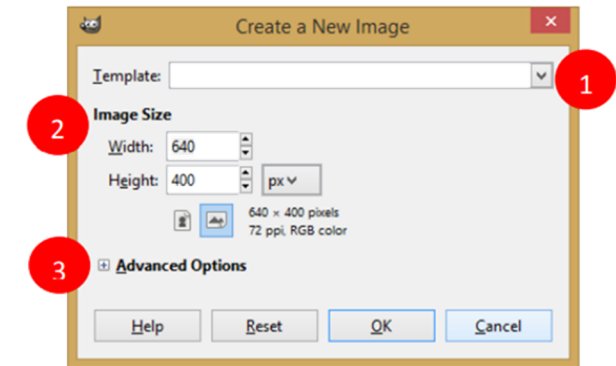
Image types:

Raster Images - Vector Images

There are three modes of color of the image:

RGB mode (red, green and Blue - 256 color degree) - Grayscale mode (up to 256 degrees of gray ranging from black to white) - Indexed mode.

  ▪ **Gimp Tools:**

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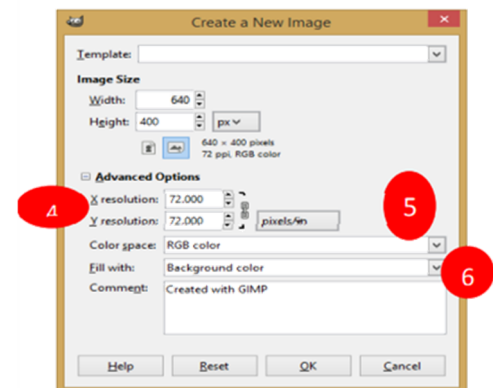
Selection tools

Rectangle tool	Ellipse tool	Free Selection (Lasso)	Magic Wand tool (Fuzzy)	Smart Scissors
Used to draw an rectangular shape	Used to select the oval shape	Used to select an irregular part	Used to specify similar color schemes	Used to select the specific area or distinctive color

Paint Tools

Pencil Tool	Blend Tool	Smudge tool	Clone	Paintbrush
used for free hand drawing	used to make color gradation using the front or back color.	used to mix the current color with the surrounding colors.	To copy a part of the image and paste it in another place	Used to draw a clear way
Eraser	**Ink**	**Bucket fill**	**zoom**	
remove a coloring Space of a picture or a drawing.	fountain pen to control drawing distinguished borders and edges with the brush	Used to fill the selection.	To enlarge the picture to see the details more clearly	

Transforming and Resizing Tools

Move tool	Crop tool	Rotate too	Flip Tool	Scale tool
Used to move an image or image layers or selection or text.	Used to cut part of an image.	Used to rotate an image.	Used to horizontally or vertically flip an image.	Used to change the dimensions of an image.

Layers tab tools

layer invisible	add a new layer	move layer top	move layer lower	copy current layer	,delete current layer